

Claims

1. Compound of formula (1) and salts, stereoisomeric forms, racemic mixtures, prodrugs, esters and metabolites thereof, wherein



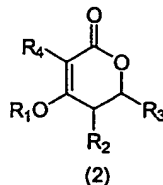
- 5 R_1 is a glycosyl moiety, hydroxyl-protected acetate derivatives thereof or amino derivatives thereof;

- R_2 , R_3 and R_4 are, each independently, selected from the group comprising hydrogen, C_{1-6} alkyl, C_{2-20} alkenyl, C_{6-20} arylalkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkyl C_{1-6} alkyl, C_{6-20} aryl aralkyl, alkylcarbonyloxy, arylcarbonyloxy, alkyloxy, alkylthio, alkylamino, alkyloxyalkyl, alkanoyl, alkylcarbonylalkyl, optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, hydroxy, cyano, halogen or amino optionally mono- or disubstituted wherein the substituents are independently selected from the group comprising alkyl, aryl, aralkyl, aryloxy, arylamino, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkoxy.

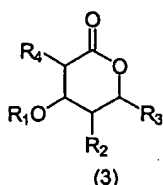
2. Compound according to claim 1, wherein said glycosyl moiety is a saccharyl moiety, a hydroxy-substituted cyclohexyl moiety, hydroxyl-protected acetate derivatives thereof or amino derivatives thereof.

3. Compound according to claim 1 or 2, wherein R_2 , R_3 and R_4 are, each independently, selected from the group comprising hydrogen, C_{1-6} alkyl, C_{2-20} alkenyl, C_{6-20} arylalkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkyl C_{1-6} alkyl, C_{6-20} aryl and R_1 is selected from the group comprising glucopyranosyl, fructosyl, galactopyranosyl, mannopyranosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, threosyl, sorbosyl, psicose, tagatose, fucose, arabinose, xylofuranose, lyxose, talose, idose, gulonic acid, allose, mannose, sedoheptulose, maltose, lactose, glucofuranose, sucrose, cellobiose, trehalose, gentiobiose, melibiose, turanose, sophorose, isosucrose, raffinose, gentianose, 2-amino-2-deoxy glucosyl, 2-amino-2-deoxy galactosyl, 2-amino-1,3-cyclohexanediol, hydroxyl-protected acetate derivative thereof or amino derivatives thereof.

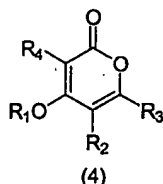
4. Compound according to any of claims 1 to 3, having the formula (2), wherein R_1 , R_2 , R_3 and R_4 have the same meaning as that defined above.



5. Compound according to any of claims 1 to 3, having the formula (3), wherein R_1 , R_2 , R_3 and R_4 have the same meaning as that defined above.

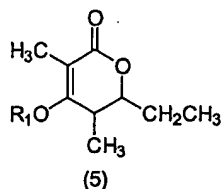


6. Compound according to any of claims 1 to 3, having the formula (4), wherein R_1 , R_2 , R_3 and R_4 have the same meaning as that defined above.



- 10 7. Compound according to any of claims 1 to 6, wherein R_1 is glucopyranosyl or galactopyranosyl, R_2 , R_3 and R_4 are each independently C_{1-6} alkyl.

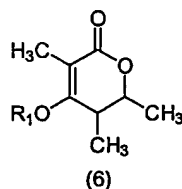
8. Compound according to any of claims 1 to 4, having the formula (5),



- 15 wherein R_1 is selected from the group comprising glucopyranosyl, fructosyl, galactopyranosyl, mannopyranosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, threosyl, sorbosyl, psicose, tagatose, fucose, arabinose, xylofuranosyl, lyxose, talose, idose, gulose, allose, allose, mannoheptulosyl, sedoheptulosyl, maltosyl, lactosyl, glucofuranosyl, sucrose, cellobiosyl, trehalose, gentiobiosyl, melibiosyl, turanosyl,

sophorosyl, isosucrosyl, raffinosyl, gentianosyl, 2-amino-2-deoxy glucosyl, 2-amino-2-deoxy galactosyl, 2-amino-1,3-cyclohexanediol, hydroxyl-protected acetate derivatives thereof or amino derivatives thereof.

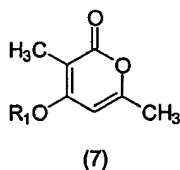
9. Compound according to any of claims 1 to 3 and 5, having the formula (6)



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- wherein R_1 is selected from the group comprising glucopyranosyl, fructosyl, galactopyranosyl, mannopyranosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, threosyl, sorbosyl, psicose, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl, idosyl, gulose, allose, allose, mannoheptulosyl, sedoheptulosyl, maltosyl, lactosyl, glucofuranosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, gentianosyl, 2-amino-2-deoxy glucosyl, 2-amino-2-deoxy galactosyl, 2-amino-1,3-cyclohexanediol, hydroxyl-protected acetate derivatives thereof or amino derivatives thereof.
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10. Compound according to any of claims 1 to 3 and 6, having the formula (7)

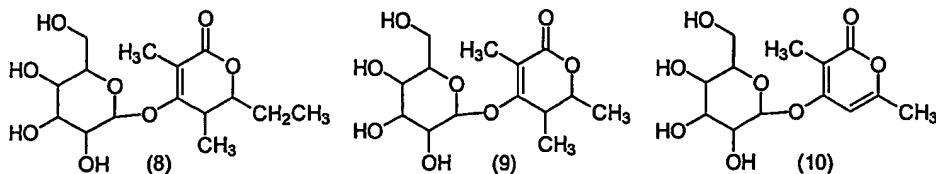


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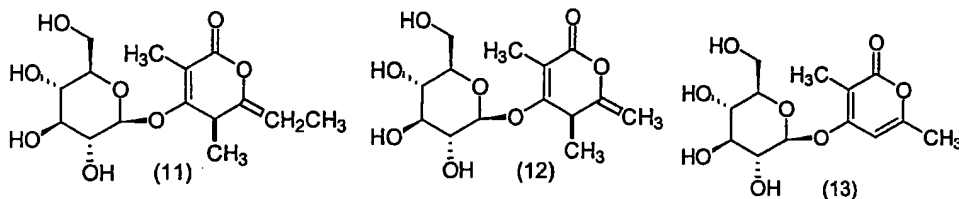
- wherein R_1 is selected from the group comprising glucopyranosyl, fructosyl, galactopyranosyl, mannopyranosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, threosyl, sorbosyl, psicose, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl, idosyl, gulose, allose, allose, mannoheptulosyl, sedoheptulosyl, maltosyl, lactosyl, glucofuranosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, gentianosyl, 2-amino-2-deoxy glucosyl, 2-amino-2-deoxy galactosyl, 2-amino-1,3-cyclohexanediol, hydroxyl-protected acetate derivatives thereof or amino derivatives thereof.
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11. Compound according to any of claims 8 to 10, wherein R_1 is β -D-glucopyranosyl.

12. Compound according to any of claims 1 to 11 having the formula (8), (9), or (10) or stereoisomers thereof



13. Compound according to claim 12 having the formula (11), (12) or (13)



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14. Use of a compound according to any of claims 1 to 13 as a medicament.
15. Use of a compound according to any of claims 1 to 13 as a phytopharmaceutic.
16. Use of a compound according to any of claims 1 to 13 as a biostatic.
17. Use of a compound according to any of claims 1 to 13 as a biocide.
- 10 18. Use of a compound according to any of claims 1 to 13 as an antibiotic.
19. Use of a compound according to any of claims 1 to 13 as an antifouling agent.
20. Use of a compound according to any of claims 1 to 13 as an immunosuppressive agent.
21. Use of a compound according to any of claims 1 to 13 as an antifungal.
- 15 22. Use of a compound according to any of claims 1 to 13 as a cholesterol lowering agent.
23. Use of a compound according to any of claims 1 to 13 as an anticancer drug.
24. Pharmaceutical composition comprising at least one compound according to any of claims 1 to 13 and a pharmaceutically acceptable carrier.

25. Use of a compound according to any of claims 1 to 13 in the preparation of a medicament for the treatment of cancer.
26. Use of a compound according to any of claims 1 to 13 in the preparation of a medicament for the treatment of fungal diseases.
- 5 27. Use of a compound according to any of claims 1 to 13 in the preparation of a medicament for the treatment of cholesterol induced diseases.
28. Use of a compound according to any of claims 1 to 13 in the preparation of a medicament for the treatment of immune diseases.
29. Use of a compound according to any of claims 1 to 13 as an intermediate in the
10 synthesis of polyketides.
30. Method for the preparation of a compound according to any of claims 1 to 13.